

IN THE CLAIMS

Page 18, line 1, change "PATENT CLAIMS" to --What is claimed is:--.

Cancel claims 1-23 and add new claims 24-46, reading as follows:

24. (New) A method for precise working of material, particularly organic tissue, comprising the step of providing laser pulses with a pulse length between 50 fs and 1 ps and with a pulse frequency from 50 kHz to 1 MHz and with a wavelength between 600 and 2000 nm for acting on the material to be worked.

25. (New) The method for precise working of material according to claim 24, wherein the energy of the individual pulses is between 100 nJ and 5 μ J.

26. (New). The method for precise working of material according to claim 24, wherein the laser pulses are focused on or in the material and the focal points are guided in three dimensions.

27. (New) The method for precise working of material according to claim 26, wherein the focus points are guided in such a way that a substantially cohesive cut surface is generated in the material.

28. (New). The method for precise working of material according to claim 27, wherein a second cut surface is generated in the material and, together with the first cut surface, surrounds an essentially lens-shaped portion of material.

29. (New). The method for precise working of material according to claim 28, wherein additional cut surfaces are generated in the severed portion of material.

30. (New) The method for precise working of material according to claim 27, wherein at least one cut is generated between the material surface and the severed portion of

material.

31. (New) The method for precise working of material according to claim 28 in combination with claim 30, wherein the at least one portion of material is extracted from the material through the at least one cut.

32. (New) The method for precise working of material according to claim 26, wherein the time interval between the laser pulses is varied depending upon the location of the focus point.

33. (New) The method for precise working of material according to claim 26, wherein the speed at which the focus points are guided is varied depending upon the location of the focus points.

34. (New) Apparatus for precise working of material, particularly organic tissue, comprising a pulsed laser, wherein the laser has a pulse length between 50 fs and 1 ps and with a pulse frequency of 50 kHz to 1 MHz.

35. (New) Apparatus for precise working of material according to claim 34, wherein the energy of the individual laser pulses is between 100 nJ and 5 μ J.

36. (New) The apparatus for precise working of material according to claim 34, wherein beam devices for beam shaping and/or beam control and/or beam deflection and/or beam focusing are further provided.

37. (New) The apparatus for precise working of material according to claim 34, wherein the beam devices are programmable.

38. (New) The apparatus for precise working of material according to claim 34,

wherein holding devices are further provided for positioning and/or fixating the material to be worked.

39. (New) The apparatus for precise working of material according to claim 34, wherein a work beam of the radiation source can be applied to the material or in the material by means of the beam devices in geometrically predefinable shapes in a time sequence that can be predetermined.

40. (New) The apparatus for precise working of material according to claim 39, wherein the pulsed work beam can be applied to the material by the beam deflection device, during which time the repetition rate can be modified.

41. (New) The apparatus for precise working of material according to claim 34, wherein the laser is a fiber laser.

42. (New) The apparatus for precise working of material according to claim 34, wherein the laser is a disk laser.

43. (New) The apparatus for precise working of material according to claim 34, wherein the laser is a combination of fiber laser oscillator and disk laser amplifier.

44. (New) The method for precise working of material according to claim 30, wherein the length of the cut between the material surface and the material portion along the material surface is appreciably smaller than the circumference of the material portion.

45. (New) The method for precise working of material according to claim 31, wherein the material portion is divided into small fragments and the extraction of these fragments is carried out by means of a suction/rinsing device.

46. (New) A method of using said apparatus according to claims 34 comprising the step of using said apparatus for refractive surgery.